

What is claimed is:

1. A fluorescence observing apparatus having:

an excitation filter unit for transmitting only exciting light with particular wavelengths, of illuminating light; and

an absorption filter unit for transmitting only fluorescent light produced from a specimen by irradiating the specimen with the exciting light to block the exciting light,

wherein space between a half-value wavelength on a long-wavelength side of the excitation filter unit and a half-value wavelength on a short-wavelength side of the absorption filter unit is in a range of 6-12 nm.

2. A fluorescence observing apparatus according to claim 1, wherein variations in half-value wavelengths of the excitation filter unit and the absorption filter unit where humidity is changed from 10 % to 95 % are within 0.5 nm.

3. A fluorescence observing apparatus according to claim 1 or 2, wherein the excitation filter unit and/or the absorption filter unit includes a multilayer film comprised of at least 90 layers.

4. A fluorescence observing apparatus according to claim 1 or 2, wherein each of the excitation filter unit and the absorption filter unit includes a multilayer film comprised of SiO_2 and Ta_2O_5 .

5. A fluorescence observing apparatus according to claim 1 or 2, incorporated in an optical system of a microscope.

6. A fluorescence observing apparatus according to claim 1 or 2, incorporated in

an optical system of an endoscope.

7. A fluorescence observing apparatus according to claim 1 or 2, wherein each of the excitation filter unit and the absorption filter unit includes a multilayer film comprised of SiO_2 and Ta_2O_5 , and the excitation filter unit and/or the absorption filter unit includes a multilayer film comprised of at least 90 layers.

8. A fluorescence observing apparatus according to claim 1 or 2, incorporated in an optical system of a microscope, wherein each of the excitation filter unit and the absorption filter unit includes a multilayer film comprised of SiO_2 and Ta_2O_5 , and the excitation filter unit and/or the absorption filter unit includes a multilayer film comprised of at least 90 layers.

9. A fluorescence observing apparatus according to claim 1 or 2, incorporated in an optical system of an endoscope, wherein each of the excitation filter unit and the absorption filter unit includes a multilayer film comprised of SiO_2 and Ta_2O_5 , and the excitation filter unit and/or the absorption filter unit includes a multilayer film comprised of at least 90 layers.